Air Quality in Utah: Educating Drivers, Improving our Air

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Breathe Utah



Utah ranks high in rank air

Air quality * 4 of the 5 most-polluted spots in U.S. are here, including Logan, St.C. Ogden.

By CHRISTOPHER SMART Ne lating blins

If you thought the air looked had in northern Utah on Friday, country were in the Beehive.

According to Air Now (www. airnowgov), a national cooperalive of government agencies. you were right: Four of the five the worst air was measured in most polluted locations in the midafternoon in Logan, Salt

tion in Box Elder County and Ogden, La Grande, Ore., round- al Weather Service. ed out the top five.

has been in effect for the past several days along the Wasatch Front and in Cache County, is expected to be canceled by Sunday as a Pacific cold front moves into the stary, according

Lake City, Washakie Reserva- to the Utah Division of Air. Quality (DAQ) and the Nation-

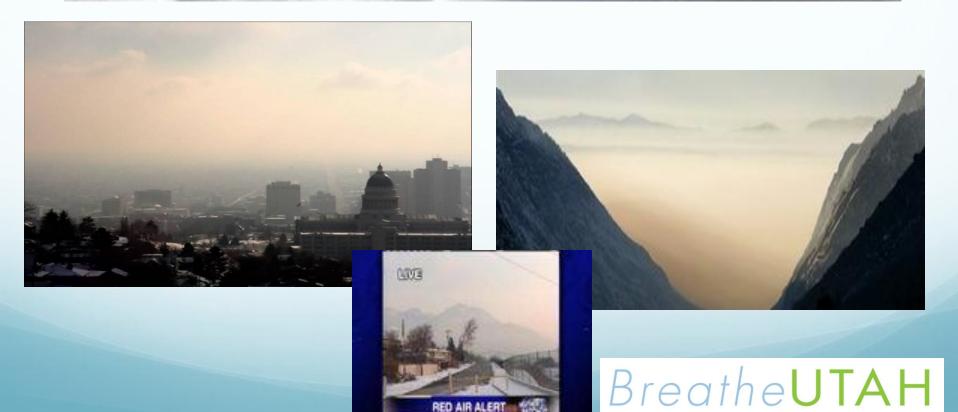
At 3 p.m. Fridge, PM 2.5 com-But the "red air alert," which contrations - a soup of microscopic particles of soot and chemical pollutants - mossured 96.9 micrograms per cuhis meter of air in Logan, according to the Utah Devision

Worst air quality in U.S. for Friday

- I LINCOUS
- Suit Cate City.
- E Washakin Res., Utah
- III Ogden
- M La Grande, Ore.

Saturday's forecast for worst air in U.S.

- M La Grande, City.
- MI LOUBAN
- III Cloderi
- III Chwo, Calif.
- Microscopic Microscopic Research prior. Il Microsia



What is air pollution?



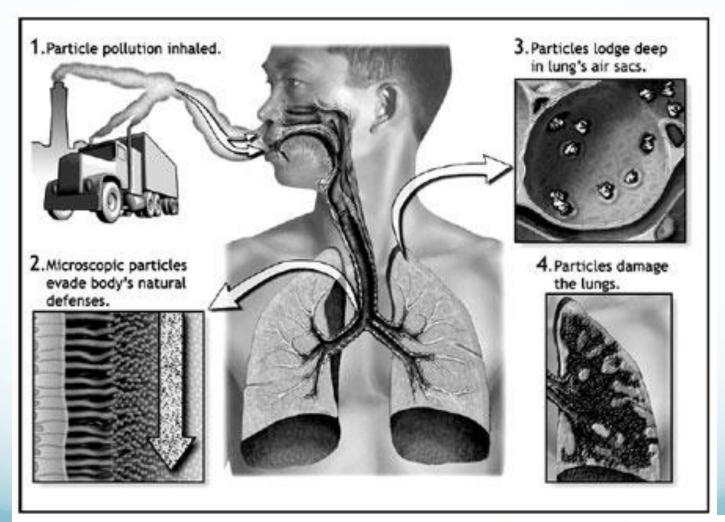
We get a grade of 'F'

Cities along the Wasatch Front and in Cache Valley are among the most polluted in the country for shortterm particle pollution.

American Lung Association, 2012 State of Our Air Report



WHY is air pollution a problem?

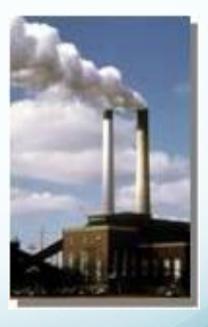


The most harmful pollutants come from things we burn

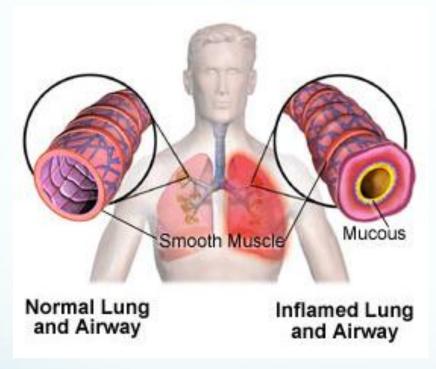
- Diesel fuel —Benzene = arcinogen

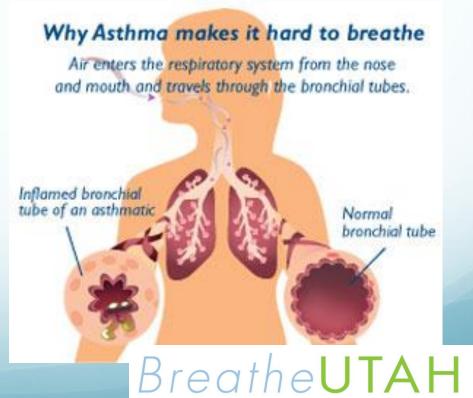






WHY is air pollution a problem?





It's especially bad for kid's lungs



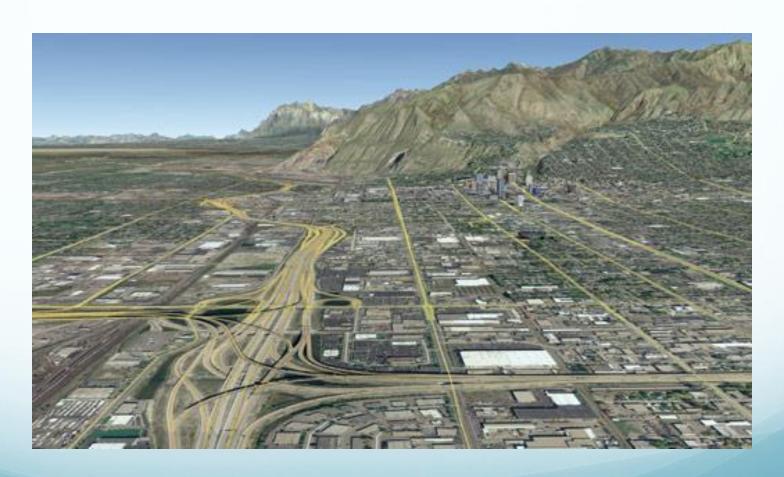
- Same air in smaller bodies: greater exposure per lb body weight
- Faster rate of breathing
- More active, especially outdoors
- More time spent outdoors
- Lungs continue to grow into adolescence

Over 72,000 Utah kids have asthma



about 8.5% of all Utahns have asthma

Different asthma rates along I-15 corridor



Higher asthma rates

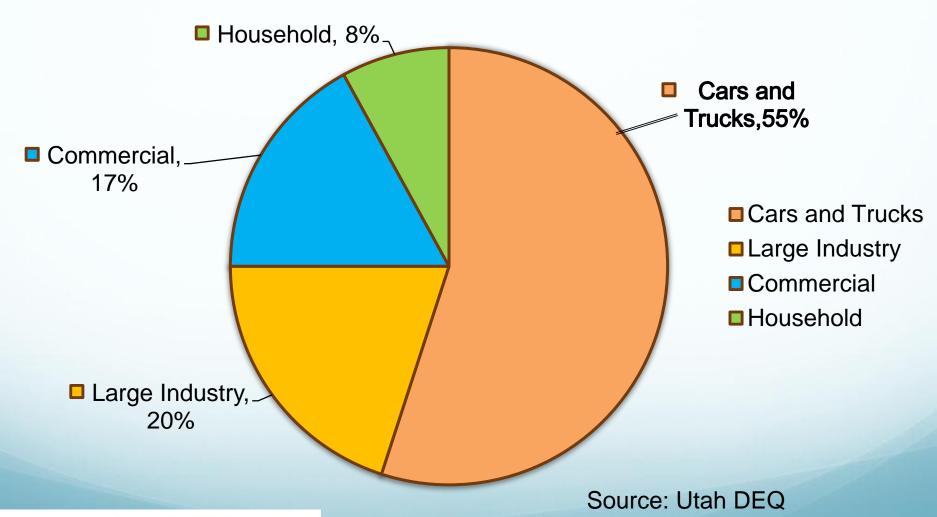
- Woods Cross and North Salt Lake –
 16.2%
- Riverdale and South Ogden 15.8%
- Salt Lake City 13%
- South Ogden 12.9%

Source: Utah Department of Health

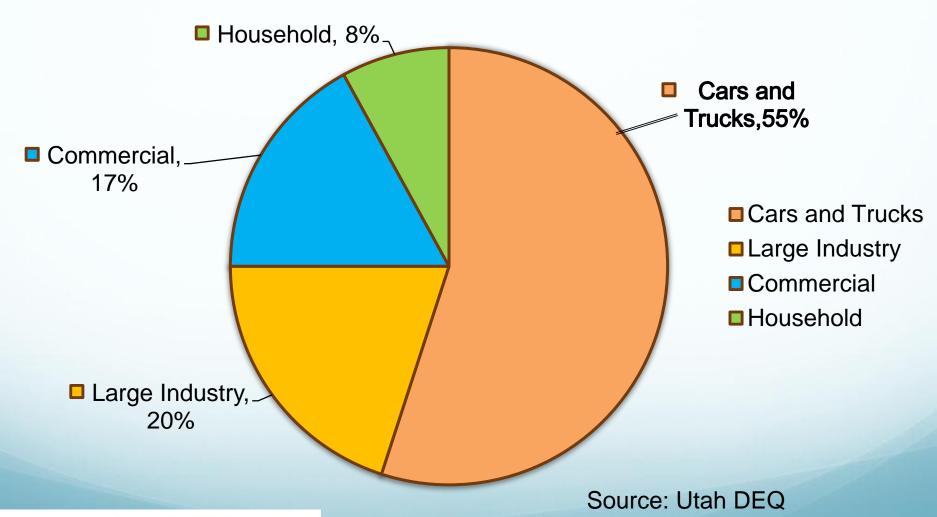
Our Air Quality Effects:



WHO...makes air pollution?



WE ALL make air pollution



As drivers, what do we know?





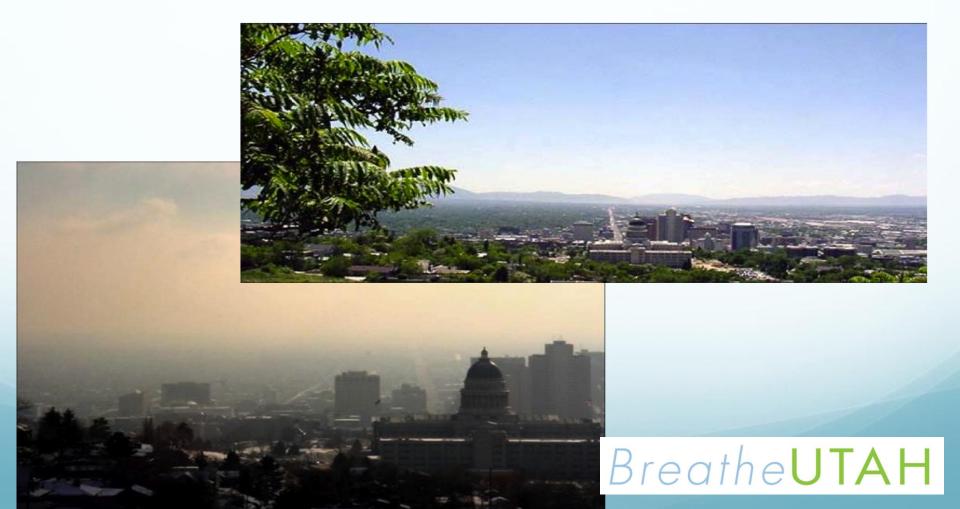
Utah's 73,857 new drivers in 2011 had two things in common:



They all breathe the same air...



...and *did not* learn about the connection between our air and our cars.



Each Driver's Responsibility

2012 Utah Senate

Air Quality Resolution 003



General Description:

"This resolution of the Senate encourages instruction on ways to improve air quality and the harmful effects of vehicle emissions, and encourages Utah motorists to take responsibility to improve air quality."

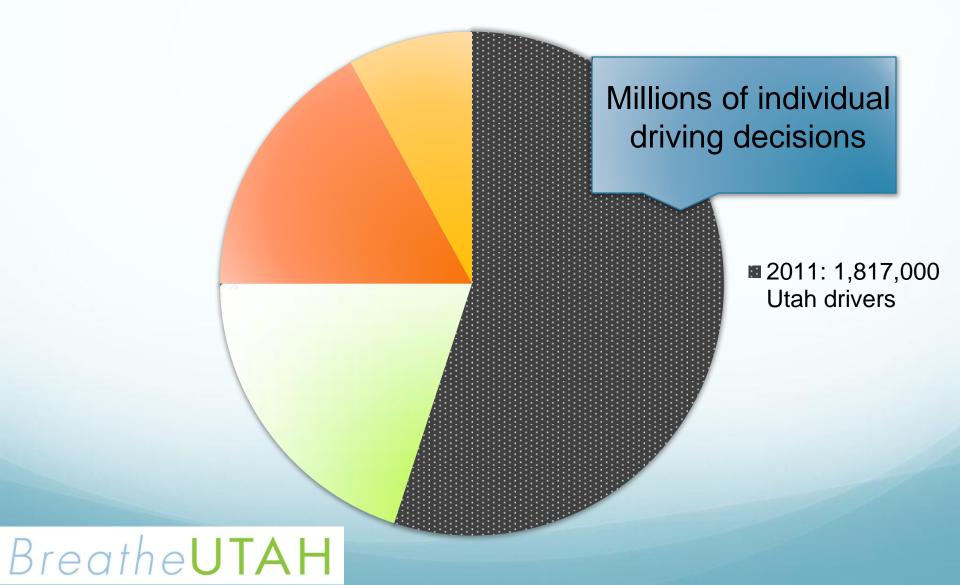


Educating Utah Drivers

2012 Utah Senate, Air Quality Resolution 003

- 1. Understand the harmful effects of vehicle emissions
- 2. Know ways to improve air quality
- 3. Encourage Utah motorists to take responsibility to improve air quality

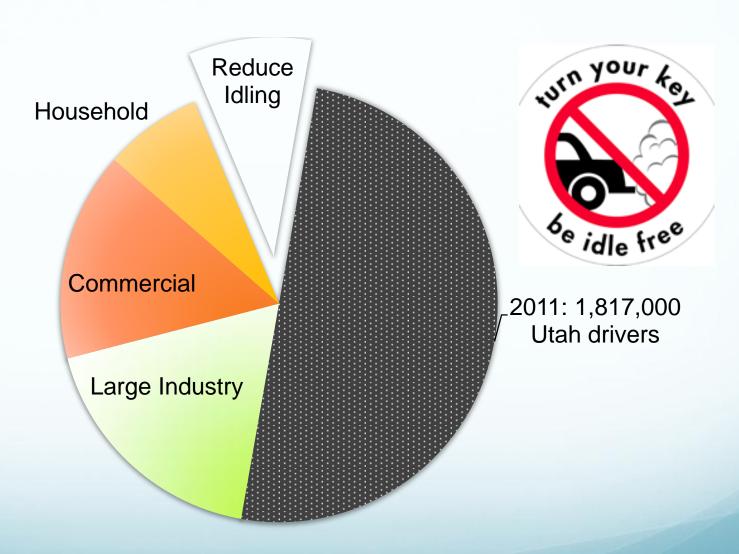
WE ALL contribute to our air

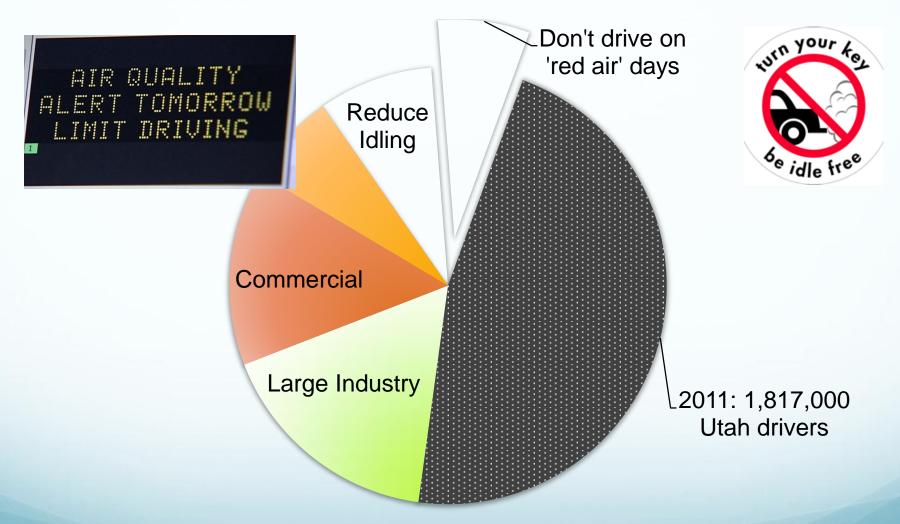


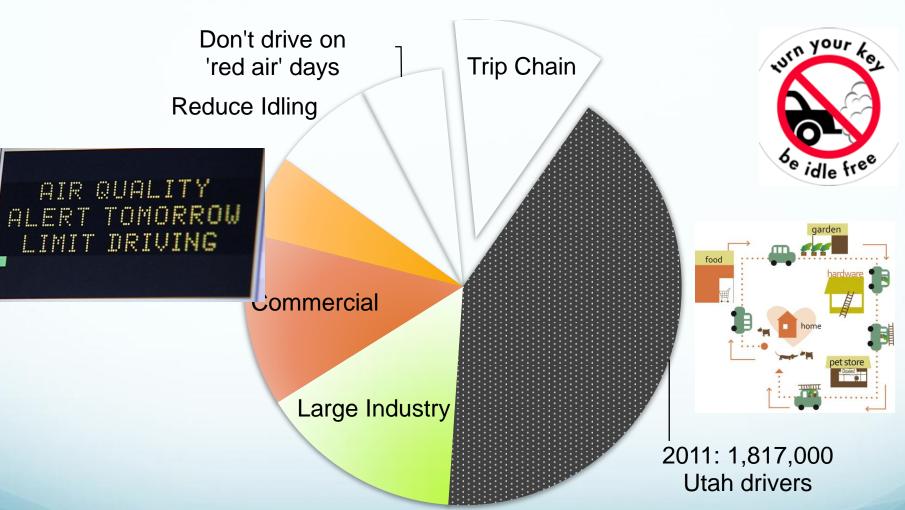
How often is the air 'bad'?

On average, Utah experiences 14 days of 'red air' each year. These are times human health is most threatened.









Don't drive on 'red air' days

Reduce Idling

Trip Chain

Walk/Bike/Bu

Se idle free

Household

Commercial

food hardware home

IMIT DRIVING

Large Industry

2011: 1,817,000 Utah drivers

Be Idle Free

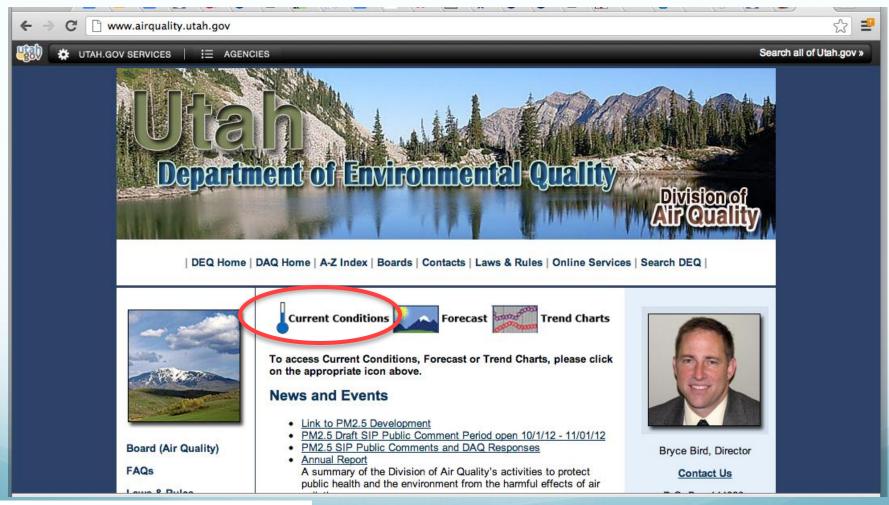
 10 seconds of idling can use more gas than turning your engine off, then back on.

Source: California Energy Commission

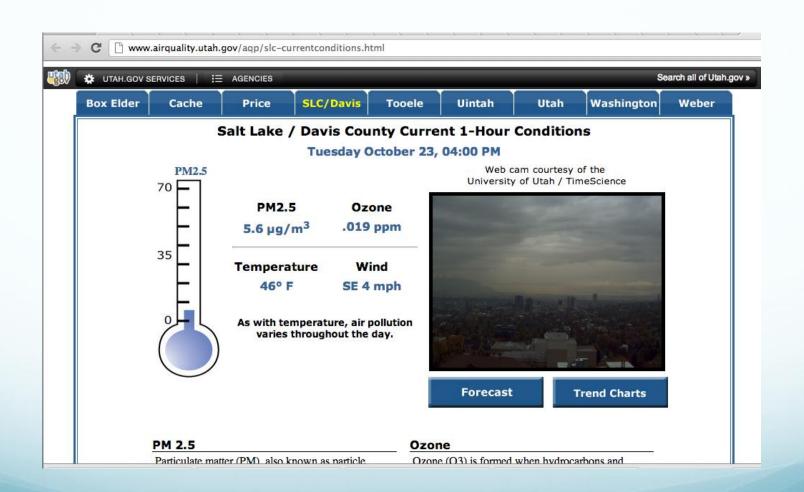
- Does your school have an "Idle Free" program or policy?
- Salt Lake City ordinance



www.airquality.utah.gov



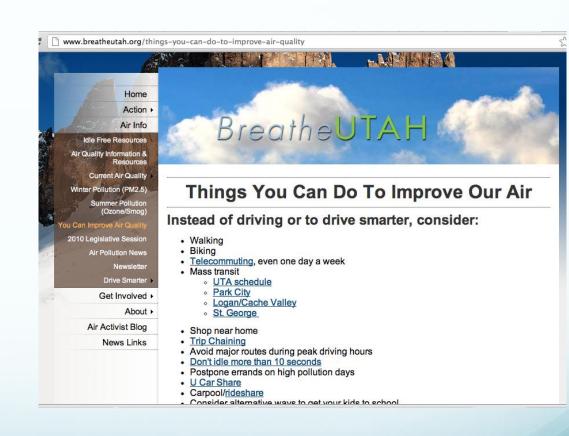
www.airquality.utah.gov



www.breatheutah.org

Breathe Utah

- Local information
- Understand local resources
- Teaching tools
- Action Plan
- Air quality news



Educating Utah Drivers

Breathe**UTAH**,

Winter Pollution in Utah

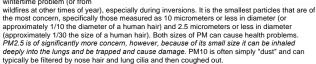
Particulate Matter (PM)

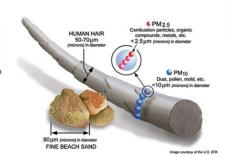
What is Particulate Matter?

Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air.

PM pollution is made up of soot (from diesel and coal burning), dust, and vehicle emissions.

In Utah it is usually a wintertime problem (or from

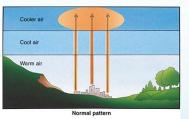




What is an inversion?

Inversions occur when cold temperatures with little or no breeze cause a dense layer of cold air to become trapped under a layer of warmer air. The warmer air acts like a lid trapping pollutants near the valley floor.

The longer the inversion lasts, the more pollutants become trapped. Along the Wasatch Front, inversions will stay until wind or a storm front comes through. This can run from a few days to a week. The longer the inversion lasts, the more pollution there is in the air.



Cool air

Warm inversion layer

Cool air

- Packet of information for educators
- Online resources
- Existing local resources

Educating Utah Drivers

Source: www.fueleconomy.gov

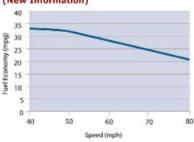
Driving More Efficiently

Drive Sensibly

Aggressive driving (speeding, rapid acceleration and braking) wastes gas. It can lower your gas mileage by 33 percent at highway speeds and by 5 percent around town. Sensible driving is also safer for you and others, so you may save more than gas money.

Fuel Economy Benefit: 5–33% Equivalent Gasoline Savings: \$0.19–\$1.23/gallon

Observe the Speed Limit (New Information)



While each vehicle reaches its optimal fuel economy at a different speed (or range of speeds), gas mileage usually decreases rapidly at speeds above 50 mph.

You can assume that each 5 mph you drive over 50 mph is like paying an additional \$0.26 per gallon for gas.

Observing the speed limit is also safer.

Fuel Economy Benefit: 7–14% Equivalent Gasoline Savings: \$0.26–80.52/gallon

Remove Excess Weight

Avoid keeping unnecessary items in your vehicle, especially heavy ones. An extra 100 pounds in your vehicle could reduce your MPG by up to 2 percent. The reduction is based on the percentage of extra weight relative to the vehicle's weight and affects smaller vehicles more than larger ones.

Fuel Economy Benefit: 1–2%/100 lbs
Equivalent Gasoline Savings: \$0.04–\$0.07/gallon

- Packet of information for educators
- Online resources
- Existing local resources



Questions?

BreatheUTAH

www.breatheutah.org